

UNIVERSITY OF OXFORD

Department of Computer Science

RESEARCH LECTURER IN COMPUTATIONAL BIOLOGY

Description of Appointment and Application Procedure

Applications are invited for a Research Lecturership in Computational Biology. The salary will be on a scale up to £57,431 per annum; this upper limit may be extended further for an exceptional applicant when support is available from external funds. Details of the Departments and further details of the University post are given in Section II.

The successful candidate must have a record of internationally excellent research in computational biology. The postholder will be a full academic member of the Computational Biology Group in the Department of Computer Science.

We particularly welcome applications from researchers with expertise that complements the existing research areas in the Computational Biology Group (see section II).

Duties

The person appointed will work in the Department of Computer Science, under its head of department (initially Prof A W Roscoe, FREng). He or she will also carry out the standard duties of a Research Lecturer in the Department of Computer Science.

The duties of the post are as follows:

- To engage in research at an international standard of excellence.
- To apply for research funding.
- To participate in the teaching and administration of the Department of Computer Science in both term and vacation under the direction of the head of department of the Department of Computer Science. The lecturer may be asked to lecture to undergraduates and graduate students, to give instruction in the practical laboratories, and to lead classes.
- *Examining* - The postholder will be required to take part in university examining as and when requested to do so by a committee for the nomination of examiners, unless he or she can show reasonable cause, to the satisfaction of the Vice-Chancellor and Proctors, why on a particular occasion he or she should not do so. (This requirement does not apply to invitations from faculty boards or divisional boards to examine theses submitted for research degrees.)
- *Supervision* - The postholder will be required to act as the supervisor of a graduate student as and when requested to do so by a faculty board, divisional board, or other competent body, unless he or she can show reasonable cause, to the satisfaction of the body concerned, why on a particular occasion he or she should not do so.

Selection Criteria

A PhD in mathematics or a related discipline

The selection committee will consider the extent to which each candidate:

(a) Research

- shows evidence of substantial achievement or potential (commensurate with the candidate's career and with an academic position at Oxford University) in the fields of applied and computational mathematics relevant to computational biology as demonstrated by publications, research grants etc;
- shows evidence of a relevant and realisable research plan, relevant to the activities of the Computational Biology group;
- shows evidence of leading and participating in multidisciplinary teams and an ability to build research links between the Computational Biology Group;
- shows evidence of invitation to and participation in conferences, seminars and research workshops;
- is able to contribute effectively to the work of relevant existing research groups in both the Mathematical Institute and the Department of Computer Science.

(b) Teaching

- has the ability and experience to teach effectively over a wide range of topics at both graduate and undergraduate levels.

(c) Other duties

- demonstrates ability and willingness to participate in the full range of administrative and organisational tasks in the department.

Application Procedure

Applications should be in the form of a letter of application (clearly stating the post title) setting out how the candidate meets the selection criteria, and supported by a full curriculum vitae, a list of publications, details of teaching experience including a description of teaching approach, and a statement of research interests, together with the names and addresses of three referees (not more than two of whom should be from the same institution). These should *preferably be emailed* (most formats accepted) to job17@cs.ox.ac.uk or posted to: PA to the Head of Department, Oxford University Department of Computer Science, Wolfson Building, Parks Road, Oxford, OX1 3QD to arrive no later than 12 noon on Friday 2nd September 2011.

Candidates must ask their referees to consider the further particulars and write directly to the above address (fax +44 1865 273832 or email is sufficient) so that references arrive by the closing date.

Candidates who wish a referee or referees to be approached only with their specific permission and/or if they are being called for interview on the final shortlist or are in receipt of a conditional offer are asked to state such requirements explicitly alongside the details of the relevant referee(s). There is no application form.

It is planned to hold interviews in the week commencing Monday 26th September, 2011

Candidates short-listed for the lectureship will be invited to give a short lecture of about twenty minutes' duration on their research interests (which need not be exclusively on the candidate's own contributions) designed for a general audience of specially invited members of the Department of Computer Science.

The appointment will be subject to satisfactory completion of a medical questionnaire and the provision of proof of the right to work in the UK.

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RESEARCH LECTURERSHIP IN COMPUTATIONAL BIOLOGY

FURTHER DETAILS CONCERNING THE POST

A. *The Department*

The University of Oxford employs around 9,000 academic, research and support staff across a wide range of academic disciplines. Its mission is to achieve and sustain excellence in every area of its teaching and research, maintaining and developing its historical position as a world-class university, and enriching the international, national, and regional communities through the fruits of its research and the skills of its graduates.

The academic administration of the University is conducted through four divisions: Humanities, Social Sciences, Mathematical, Physical and Life Sciences, and Medical Sciences. The Mathematical, Physical and Life Sciences Division consists of ten constituent departments: the Department of Chemistry, the Department of Computer Science, the Department of Earth Sciences, the Department of Engineering Science, the Department of Materials, the Mathematical Institute, the Department of Physics, the Department of Plant Sciences, the Department of Statistics and Department of Zoology. The division provides a framework for interdisciplinary teaching and research, with strong links to the Medical Sciences Division.

The Department of Computer Science (DoCS) was established in 1957. It is one of the UK's leading Computer Science Departments (ranked first in a number of newspaper rankings, and third in terms of research power). In the RAE in 2008, 80% of the submitted research was found to be in the top two tiers, either 4* (world-leading) or 3* (internationally excellent). Many members of the Department are active in externally sponsored research, with both government and industrial funding. At present there are 48 members of academic staff and over 80 research staff.

DoCS has close links with government, industry, and other departments within the University. Among the latter are Mathematics, Engineering, Physics and a number of life sciences departments. It has a major role in the rapidly-developing field of e-Science, an essentially interdisciplinary activity which is at present attracting major funding from a number of sources. At present it holds £37m in external research contracts.

Research in DoCS is currently managed in six themes following a recent realignment and expansion of previous groups. *Computational Biology* (led by Professor David Gavaghan and including Professors Kevin Burrage and Helen Byrne) is one of the world's leading groups building computational models of biological systems and is particularly well known for its work on the heart; *Foundations, Logic and Structures*, (leader, Professor Samson Abramsky) which includes groups working on quantum information and computation (Professor Abramsky and Dr Bob Coecke), game semantics and verification (Professor Luke Ong) and constraints (Professor Peter Jeavons); *Information Systems* (jointly led by Professors Georg Gottlob and Ian Horrocks and including Professor Stephen Pulman, who works on Computational Linguistics, and Professor Michael Benedikt); *Programming Languages* (led by Professor Oege de Moor and including Dr Jeremy Gibbons and Dr Ralf Hinze); *Software Engineering* (led by Professor Jim Davies), works on a wide variety of areas including e-Science and model-driven development; and *Verification* (leader Professor Marta Kwiatkowska) covering probabilistic and software model checking with concurrency (Professor Bill Roscoe and Professor Gavin Lowe), and automated verification of hardware (Professor Tom Melham).

Computational Biology Group

The interests of the Computational Biology Group (CBG) within the Department of Computer Science focus on the mathematical modelling, numerical analysis, software engineering and (parallel) scientific programming research issues arising in the multiscale solution of non-linear partial differential equations governing physical transport processes and soft tissue modelling in biological and physiological systems. Further details can be found at www.cs.ox.ac.uk/activities/compbio/. The group currently consists of 5 permanent faculty, 28 post-doctoral researchers, and 29 doctoral students. The group holds regular seminar series for external and internal speakers.

B. *Standard Terms and Conditions*

1. Applications for this post will be considered by a selection committee containing representatives from the Department of Computer Science including Computational Biologists. The selection committee is responsible for conducting all aspects of the recruitment and selection process, including making a recommendation on who should be appointed.

2. The successful candidate will be appointed on the Oxford scale for research lecturers, (£49,539-£57,431). Lecturers appointed below the top of this range will receive annual increments until they reach the top point. There is also an annual 'cost-of-living' review. Departments may also, in wholly exceptional cases, propose the awarding within the substantive scale of additional increments to lecturers at any time during their appointment.

The lecturer will have the option of becoming or remaining a member of the Universities Superannuation Scheme (USS).

3. Additional remuneration is currently paid to those undertaking examining and graduate supervision.

4. Upon completion of an initial period of appointment (which is normally five years), a research lecturer is eligible for reappointment until retiring age, subject to the provisions of the Statutes and Regulations of the University. Evidence of lecturing competence and of substantial progress in research are prerequisites for reappointment to the retiring age.

At present the University's normal retirement date for academic and related staff is 30 September preceding the 66th birthday, except if the successful candidate can establish vested rights, as defined in the University's statutes (details available on request), to retirement at 67 or later, the date of retirement will not normally be later than the 30 September immediately preceding the 68th birthday.

The University is currently considering the introduction of an Employer Justified Retirement Age of 67. If adopted, this would mean that, with effect from 1 October 2011, the normal retirement date for all academic and academic-related staff would be 30 September immediately preceding the 68th birthday. There would be a procedure for considering requests from individuals to continue in employment beyond that age.

5. All appointments are subject to the relevant provisions of the Statutes and Regulations of the University in force from time to time, as published from time to time in the University Gazette.

All research lecturers, with other members of the academic staff and certain senior academic-related staff, are normally members of Congregation, which is the University's ultimate governing body. Congregation's approval is required for all university statutes or amendments to statutes, and for major policy decisions, and the members of Congregation constitute the electorate for ten of the members of the main executive body (the Council of the University) and for members of a number of other university committees. Twenty or more members of Congregation may initiate the discussion by Congregation of matters of university policy, and any two members may ask questions about the policy or administration of the University. The person appointed to this post will receive full details soon after he or she takes up the appointment.

6. The holder of this post is eligible to apply for sabbatical leave. In general, one term of sabbatical leave is available for each six terms of qualifying service: qualifying service is built up

on a 'rolling' basis, so that leave which is not taken is not lost (although qualifying service does not accrue beyond the maximum of 18 terms). Further details are available on request.

7. The University encourages links with industry and other outside bodies. Although the holding of outside appointments such as consultancies must be approved by the head of department, no limit as such is set on the amount of money individuals may receive in this way. The criterion is the amount of time such appointments take up: a maximum of 30 days per annum may be spent on such activities before any deduction in stipend is considered.

8. The Statutes and Regulations of the University record the extent of the University's claims to intellectual property, and the proportions in which exploitation revenues are shared with researchers. Copies of the relevant extracts are available on request.

9. All staff participate in the University's appraisal scheme which is currently under review.

10. The University has generous maternity leave arrangements. Provided that they have at least 26 weeks' service with the University at the fifteenth week before the expected week of childbirth, women may take up to 26 weeks leave on full pay, plus 13 weeks SMP, plus a further 13 weeks unpaid leave. Arrangements are available to enable a phased return to full duties; for women to return to work on a part-time basis after the birth of their child; and for paternity leave. Requests for flexible working arrangements will be considered.

11. The University has three subsidised nurseries and also subsidises places at some local nurseries, although at present there is a waiting list. In addition, staff have access to a childminding network. There is also a salary sacrifice scheme whereby parents with children at university nurseries are able to save on income tax and national insurance contributions, and a virtual voucher scheme for parents with children not at university nurseries or placed with childminders through the network whereby a saving is made on national insurance contributions. There is also a holiday play scheme for school-age children. Further information may be obtained from the childcare website (www.admin.ox.ac.uk/eop/child) or by e-mailing childcare@admin.ox.ac.uk, or writing to the Diversity and Equal Opportunities Unit, University of Oxford, University Offices, Wellington Square, Oxford OX1 2JD.

12. *Equality of opportunity*: The policy and practice of the University of Oxford require that all staff are offered equal opportunities within employment. Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. Subject to statutory provisions, no applicant or member of staff will be treated less favourably than another because of his or her gender, marital or civil partnership status, sexual orientation, religion or belief, racial group, age or disability.

Where suitably qualified individuals are available, selection committees will contain at least one member of each sex.

13. All data supplied by applicants will be used only for the purposes of determining their suitability for the post¹ and will be held in accordance with the principles of the Data Protection Act 1998 and the University's Data Protection Policy.

14. The appointment will be subject to satisfactory completion of a medical questionnaire and the provision of proof of the right to work in the UK.

¹ But NB if the appointee to the post is a migrant sponsored under the UK's new points-based migration system, we are required to retain all applications for the duration of the sponsorship.

Applicants who would need a work visa if appointed to the post are asked to note that under the UK's new points-based migration system they will need to demonstrate that they have sufficient points, and in particular that:

(i) they have sufficient English language skills (evidenced by having passed a test in basic English, *or* coming from a majority English-speaking country, *or* having taken a degree taught in English)

and

(ii) that they have sufficient funds to maintain themselves and any dependants until they receive their first salary payment.

Further information is available at:

<http://www.ukba.homeoffice.gov.uk/workingintheuk/tier2/generalarrangements/eligibility/>.

15. All reasonable interview expenses will be reimbursed. Removal expenses and travelling expenses in connection with the move to Oxford of the successful candidate are generally paid in full in appropriate cases. Professional expenses of up to £6,500 also are available where appropriate to cover solicitors' and other costs in connection with a move. Further details are available on request.